

**Municipality/Organization:** Town of Wenham, Massachusetts

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**EPA NPDES Permit Number:** MAR041230

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**MassDEP Transmittal Number:**

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**Annual Report Number & Reporting Period:** **Year 15**  
**April 1, 2017 – March 31, 2018**

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## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2018)

### Part I. General Information

**Contact Person:** Bill Tyack **Title:** Director of Public Works

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**Telephone #:** (978) 468-5520 ext. 6 **Email:** btyack@wenhamma.gov

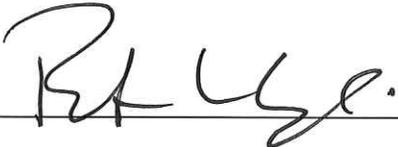
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**Mailing Address:** 91 Grapevine Road, Wenham, MA 01984

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#### Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**Signature:** 

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**Printed Name:** Peter Lombardi

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**Title:** Town Administrator

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**Date:** 4/24/18

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## **Part II. Self-Assessment**

The Town of Wenham has completed the required self assessment and determined that our municipality is in compliance with the permit conditions. The town has achieved all the goals listed in Part III of this permit.

The Town has continued the process of replacing/repairing older non-BMP style catch basins (CBs). The Public Works Department (DPW) replaced/rebuilt five CBs that had become degraded over time, limiting their functionality. The DPW has been performing these repairs in-house to reduce costs, which may result in additional repairs/replacements able to be performed under their current budgets. Additionally, the DPW plans on replacing/rebuilding eight to ten additional CBs during the upcoming Permit Year.

The Town also replaced a large culvert (Essex Street Culvert) that was deteriorated the past permit year.

All CBs in town were inspected during Permit Year 15. The DPW did not observe any additional dry weather flow (possible illicit connections) during any of these inspections that had not previously been sampled during Permit Year 5 (no contamination was discovered during the sampling/testing of the dry-weather flows in Year 5).

The Town continues to hold its annual Pleasant Pond Cleanup Day (every Spring) where volunteers, along with DPW workers, perform a cleanup of the Pleasant Pond area.

Members of Gordon College, the local Boy Scouts and local Audubon Society completed separate cleanups in April each year of the Grapevine Road and Route 97 areas (including wetlands). The Town also has prisoner work details clean up areas of Town. The DPW staff assists as needed in these cleanups as well. All of these activities work to cleanup the wetland/pond areas throughout the Town and improve the general cleanliness and water quality in these areas.

The Town held their annual Hazardous Waste Collection Day in conjunction with the Town of Hamilton on October 28, 2017 at the Hamilton DPW (this year's collection day is scheduled for September 22, 2018). Providing residents a method to properly dispose of hazardous materials, it minimizes the materials from potentially being disposed of improperly (i.e., into the drainage system/waterways).

The DPW is still currently using the proprietary product Ice Ban 50/50 in combination with road salt (sodium chloride) for their road de-icing. Ice Ban 50/50 is a mixture of 50% magnesium chloride and a proprietary blend of brewer's condensed solubles – a by-product of the domestic brewing industry (began product use in Permit Year 5). The manufacturer claims this is a more environmentally friendly product that will result in a greater than 50% reduction in chloride ions introduced into the environment (compared to traditional road salt). Since switching to the Ice Ban 50/50 product, the DPW has also noticed a significant decrease in the degradation to CBs and de-icing equipment when compared to previous years using road salt.

To date, all the known Town outfalls and drainage structures (except for some minor new known subdivision infrastructure) have been located in the field, inventoried using Global Positioning System (GPS), and photographed. The Town maintains an online GIS system which can be accessed on the Town's website. As part of the forthcoming new permit, required mapping updates for the entire system have been planned.

In an effort to be proactive, the Town has already had discussions and solicited proposals for budgeting purposes to assist in the items in the new permit.

### Part III. Summary of Minimum Control Measures

#### 1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1A Revised	Brochures/Fact Sheets	Public Works Department	Develop & distribute to all residents in water bill. Develop & Distribute to residents at Town Meetings	Informational fliers were distributed at the Spring 2017 Town Meeting.	The informational fliers were distributed again at the 2018 Town Meeting (April 7), and will be in the future 2019 Town Meeting (April 2019).
2A Revised	Storm Drain Stenciling	Public Works Department	Stencil storm drains at various locations around schools.	Stenciling of the CBs was completed in previous permit years. To date, 100% of the Town owned CBs have been stenciled.	CB stenciling has been completed in previous permit years for all Town owned CBs.
3A Revised	Develop web site	Public Works Department	Develop a public informational website.	GIS system is up-to-date (except for some minor new subdivision infrastructure) and can be accessed from the Town’s Website. Digital pictures of a portion of the outfalls have been linked to the online GIS system.  The DPW website lists notices/information regarding storm water pollution prevention and the stormwater hotline.	The Town will continue updating and maintaining the online drainage GIS as necessary. As part of the forthcoming new permit, required mapping updates for the entire system have been planned.  The DPW website will continue to post notices/information regarding stormwater pollution prevention and the stormwater hotline.
4A Revised	Implement stormwater hotline	Public Works Department	Create a hotline that residents may use for information/reporting problems.	There were no calls from residents to the DPW about stormwater issues in the past year. If any calls about stormwater issues are received, they are routed to the appropriate people at the Public Works/Highway Department.	Continue to inform residents of the proper town offices to contact if they need information or to report problems dealing with stormwater issues. Logs are kept with information on the calls received and the actions/responses performed.

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1B Revised	Storm drain stenciling	Public Works Department	Public information.	Stenciling of the CBs was completed in previous permit years. To date, 100% of the Town owned CBs have been stenciled.	CB stenciling has been completed in previous permit years for all Town owned CBs.
2B Revised	Household hazardous waste collection	Public Works Department	Annual collections to promote a cleaner environment.	A household hazardous waste drop off day for residents (in conjunction with the Town of Hamilton) was held on October 28, 2017 at the Hamilton DPW.	A household hazardous waste drop off day for residents is currently scheduled on September 22, 2018 at the Hamilton DPW.
3B Revised	Community cleanup	Public Works Department	Schedule community cleanup days to promote community awareness.	A community cleanup of Pleasant Pond took place Spring 2017.  Members of Gordon College held a cleanup day along Grapevine Road for Earth Day. Members of the local Boy Scouts and Audubon groups also held a cleanup day along Rt. 97 in April 2017. DPW staff assisted in both cleanup activities.	Pleasant Pond community cleanup day is scheduled for Spring 2018.  Members of Gordon College will hold a cleanup day along Grapevine Road for Earth Day. Members of the local Boy Scouts and Audubon groups will hold a cleanup day along Rt. 97 for Earth Day. Public Works employees assist both groups as needed with their respective cleanup activities.
4B	Adopt a storm drain	Public Works Department	Have individuals/groups cleanup storm drains to promote public awareness.	Advertisements on cable access television have been run previously asking for volunteers. However, no community groups have shown interest in participating in the adopt-a-storm drain program.	Continue to run advertisement for volunteers on cable access television.

### 3. Illicit Discharge Detection and Elimination

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
1C	Mapping	Public Works Department	Mapping catch basins & outfalls with GIS/GPS.	Drainage GIS was created and can be accessed from the Town’s Website. Drainage structures have been field located, inventoried and mapped using GPS. A total of 199 outfalls, 615 CBs and 114 drain manholes have been mapped in GIS.	The Town will continue updating and maintaining the online drainage GIS as necessary. As part of the forthcoming new permit, required mapping updates for the entire system have been planned.
2C	Identify problem areas	Public Works Department	Inspection of outfalls in dry/wet conditions to determine illicit connections.	Continued inspections of CBs during annual CB cleanings.  No additional dry-weather flows were observed that had not been previously sampled during the Permit Year 5 Sampling Program. Please note, there was no contamination discovered during the sampling/testing of the dry-weather flows in Year 5.	Continue to inspect the CBs and outfalls during cleanings for signs of illicit connections. Where signs of illicit connection are observed, samples will be taken of the outfall discharge and will be analyzed for typical illicit connection contaminants.
3C	Develop regulations/fines	Public Works Department	Submit a town ordinance to be voted on to establish regulation/fines for illicit discharges.	The ordinance was presented and passed during the May 3, 2008 Town Meeting (Permit Year 5).	The DPW will continue to enforce the regulations for illicit discharges.
4C	Elimination of illicit discharge	Public Works Department	Perform smoke testing on drainage systems to determine/eliminate illicit discharges.	No smoke testing occurred during the past year because no illicit discharges were observed during the inspections of the CBs.	Any suspected illicit discharges noted during the CB/outfall inspections will be sampled and analyzed for typical illicit connection contaminants. If contaminants are found, smoke testing will occur to locate and eliminate the source of the discharges.

#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1D Revised	Ordinance/regulatory mechanism for development	Public Works Department & Planning Board	Limiting stormwater run-off.	The town has reviewed and amended their existing regulations to include provisions for construction site stormwater runoff controls.	The appropriate Town committee(s) will use and enforce their recent regulation revisions covering construction site stormwater runoff control.
2D Revised	Site plan review	Public Works Department, Conservation & Planning Board.	Limiting storm water run-off.	All proposed construction projects are reviewed and signed off on by the DPW and by the Project Review Committee (PRC), which includes among others the Planning Board and the Conservation Commission.	The DPW and PRC will continue to review all proposed plans for new/re-development in the town.
3D Revised	Site inspection	Public Works Department Public Works Department/Town Boards	Compliance with newly adopted ordinance.	Site inspections were performed by the DPW and by the PRC.	The DPW and the PRC will continue to perform site inspections for new/re-development in the town.  One new development (Spring Hill Farms) is starting construction. Site inspections are being performed.

## 5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1E	Develop structural / non-structural BMP's	Public Works Department	Reduce pollutants.	Five CBs were repaired that had degraded over time, limiting their functionality. All new/replaced CBs are required to be installed with deep sumps.	The DPW will continue to promote the use of infiltration BMPs for new/re-development and require that all new/replaced CBs have deep sumps.
Revised				The DPW changed their de-icing product from road salt (sodium chloride) and sand to a proprietary product "Ice Ban 50/50" and salt/sand during Permit Year 5. Ice Ban 50/50 is a mixture of 50% of magnesium chloride and a proprietary blend of brewer's condensed solubles – a by-product of the domestic brewing industry.	The Conservation Commission mandates that all roof runoff be infiltrated for new projects.  Continue the use of Ice Ban as the primary road de-icer.  The Public Works/Highway Department will repair and/or replace eight to ten older non-BMP style and/or deteriorated CBs. The DPW performs the replacements in-house with their staff, which will save costs and allow possible additional replacements.
2E	Ordinance governing post construction	Public Works Department / Town Boards	Reduce pollutants.	The town has reviewed and amended their existing regulations to include provisions for post-construction stormwater management in new and redevelopment projects.	The appropriate Town committee will use and enforce their regulation revisions covering post-construction stormwater management in new and redevelopment projects.
Revised					
3E	Ensure long-term maintenance	Public Works Department / Private	Assure long-term maintenance.	Continued aggressive maintenance plan for the town-owned BMPs with annual inspections by the Public Works/Highway Department.	Continue aggressive maintenance plan for the town owned BMPs with annual inspections
Revised				In past years, issued permits to trap beavers that were restricting flow of rivers/streams and disrupting stormwater flows. However, zero permits were issues in the past year.	

4E	Determine appropriate BMP	Public Works Department	Improve clarity/reduce sediment.	All proposed new/re-development project plans have been reviewed by DPW and by the PRC for appropriate BMPs.  The Conservation Commission mandates that all roof runoff be infiltrated for new projects.  All new/replaced CBs are required to be installed with deep sumps.  Appropriate BMPs are recommended for use whenever feasible.	DPW and the PRC will continue to review all plans for new/re-development to ensure appropriate BMPs are being implemented.
Revised		Public Works Department/Town Boards.			

### 6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1F	Operation / maintenance program	Public Works Department	Sweep all streets and clean all catch basins.	Swept 100% of town roads (approx. 33 miles) and cleaned and inspected all Town owned CBs.	The Town began their yearly street sweeping and catch basin cleaning program in April 2018. 100% of the Town's roadways will be swept and all catchbasins cleaned and inspected.
Revised					
2F	Employee training	Public Works Department	Conduct catch basin survey for integrity/dry weather flows.	The Town continued training employees on all outfall locations, proper inspection techniques of outfalls and CBs, and proper actions needed for chemical spills into the storm drain system.	Continue the training of all public works employees on outfall and CB inspections, and on proper chemical spill actions.
Revised					

3F	Determine appropriate BMP	Public Works Department	Installed deep sump catch basins w/ infiltration trenches for new cemetery and Pleasant St. sidewalk & roadwork.	Five CBs were repaired that had degraded over time, limiting their functionality. All new/replaced CBs are required to be installed with deep sumps.	The DPW and the PRC will continue to review all plans for new/re-development to ensure appropriate BMPs are being implemented.
Revised		Public Works Department/Town Boards.		All proposed new/re-development plans have to be reviewed by the DPW and the PRC.  All new/replaced CBs are required to be installed with deep sumps.  Appropriate BMPs are recommended for use, whenever feasible.	The Public Works/Highway Department will repair and/or replace eight to ten non-BMP style and/or deteriorated CBs. The DPW performs the replacements in-house with their staff, which will save costs and allow possible additional replacements.  One new development (Spring Hill Farms) is starting construction. Appropriate BMPs were reviewed by the Town and are being implemented by the developer.
4F	Public involvement	Public Works Department / Health Department	Household hazardous waste collection / public participation.	A community cleanup of Pleasant Pond took place Spring 2017.  Members of Gordon College held a cleanup day along Grapevine Road for Earth Day. Members of the local Boy Scouts and Audubon groups also held a cleanup day along Rt. 97 in April 2017. DPW staff assisted in both cleanup activities.  A household hazardous waste drop off day for residents (in conjunction with the Town of Hamilton) was held on October 28, 2017 at the Hamilton DPW.	Pleasant Pond community cleanup day is scheduled for Spring 2018.  Members of Gordon College will hold a cleanup day along Grapevine Road for Earth Day. Members of the local Boy Scouts and Audubon groups will hold a cleanup day along Rt. 97 for Earth Day. Public Works employees assist both groups as needed with their respective cleanup activities.  A household hazardous waste drop off day for residents, in conjunction with the Town of Hamilton, is currently scheduled on September 22, 2018 at the Hamilton DPW.
Revised					

**7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
1G Revised	Vegetation swales	Public Works Department	Reduce pollutants.	Continued to monitor opportunities to use vegetative swales on new/re-development projects and use on existing drainage facilities.	The DPW along with the PRC will continue to monitor opportunities for use of vegetative swales.
2G Revised	Infiltration drain fields	Public Works Department	Reduce runoff.	Continued to monitor opportunities to use infiltration drain fields on new/re-development projects and use on existing drainage facilities.  Continued to require all new development in Town to infiltrate roof runoff on-site.	The DPW along with the PRC will continue to monitor opportunities for use of infiltration drain fields.  The Conservation Commission mandates that all roof runoff be infiltrated for new projects.  One new development being constructed will infiltrate all roof runoff and have an infiltration basin constructed as part of the project.
3G Revised	Dry wells	Public Works Department / Planning Board	Reduce runoff.	Continued to require all new development in Town to infiltrate roof runoff on-site.	The Conservation Commission mandates that all roof runoff be infiltrated for new projects.  The DPW and the PRC will continue to monitor opportunities for drywell use.  One new development being constructed will infiltrate all roof runoff into drywells.

4G	Deep sumps / hooded catch basins	Public Works Department / Planning Board	Reduce sediment / pollutants.	Five CBs were repaired that had degraded over time, limiting their functionality. All new/replaced CBs are required to be installed with deep sumps.	The Public Works/Highway Department will repair and/or replace four to six older non-BMP style and/or deteriorated CBs. The DPW performs the replacements in-house with their staff, which will save costs and allow possible additional replacements.  Continue to monitor and enforce that all new/re-installed CBs have deep sumps.
Revised					

**7b. WLA Assessment**

The town will also continue to comply with current and future requirements related to the pathogen TMDL for the North Coastal Watershed. BMPs 1A, 2A, 3A, 4A, 1B, 2C, 3C should help in meeting this TMDL.

**Part IV. Summary of Information Collected and Analyzed**

The town’s drainage system has been mapped via GIS (except for some minor new subdivision infrastructure). Approximately 199 outfalls, 615 CBs and 114 drain manholes were located in the field, inventoried using Global Positioning System (GPS) technology, and photographed during the duration of this permit. Any new drainage structures will continue to be located, photographed and added in the field on the Town’s online GIS system.

Approximately 615 catch basins were visually inspected during the cleaning program and no dry weather (illicit discharge) issues were noted that had not been sampled during Permit Year 5. Please note, there was no contamination discovered during the sampling/testing of the dry-weather flows in Year 5.

**Part V. Program Outputs & Accomplishments (OPTIONAL)**

(Since beginning of permit coverage unless specified otherwise by a \*\*, which indicates response is for period covering April 1, 2017 through March 31, 2018)

**Programmatic**

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	(\$)	N/A*
Total program expenditures since beginning of permit coverage	(\$)	N/A*
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

\* MS4 Stormwater related items are funded under the general DPW budget (i.e. no separate line items)

**Education, Involvement, and Training**

Estimated number of property owners reached by education program(s)	(# or %)	4,000
Stormwater management committee established	(y/n)	N
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	~0.25
Shoreline cleaned since beginning of permit coverage	(mi.)	~1.5
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	N/A
▪ material collected **	(tons or gal)	N/A
School curricula implemented	(y/n)	N

## Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with “X”)					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control					X
▪ Post-Development Stormwater Management					X
Accompanying Regulation Status (indicate with “X”)					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control					X
▪ Post-Development Stormwater Management					X

## Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	>95%
Estimated or actual number of outfalls	(#)	199
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	>95%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	0%
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	0
Illicit connections removed **	(# ); and (est. gpd)	N/A
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	N/A
% of population on sewer	(%)	<5%
% of population on septic systems	(%)	>95%

## Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	100%
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	0

## Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100%
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Y
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y

## Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	615
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	6,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$12/basin
• Disposal cost**	(\$)	Incl. in rate

Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	Contracted
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	N
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vactor **	(%)	0%

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	2-3
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	21 cu. yds.
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	9,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	\$119/hr
• Disposal cost**	(\$)	Incl. in rate
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	Contracted
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	N
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	0%

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	0%
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	N/A
Integrated Pest Management (IPM) Practices Implemented	(y/n)	Y

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand % BCS	0% 0% 25%± 0% 0% 0% 50%± 25%±
<b>Note:</b> A mixture of sand and the proprietary product “Ice Ban 50/50” was used for de-icing during the previous permit year. Ice Ban 50/50 is a mixture of 50% magnesium chloride and a proprietary blend of brewer’s condensed solubles (BCS) a by-product of the domestic brewing industry.		
Pre-wetting techniques utilized **	(y/n or %)	Y
Manual control spreaders used **	(y/n or %)	Y
Zero-velocity spreaders used **	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l <sub>n</sub> mi. or %)	None
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l <sub>n</sub> mi. or %)	None
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	N
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Y

### Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	N/A
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	N/A
<ul style="list-style-type: none"> <li>Treatment units induce infiltration within 500-feet of a wellhead protection area</li> </ul>	# or y/n	N/A